



1
00:00:08,140 --> 00:00:04,070
[silence--NASA Planetary Science open]

2
00:00:16,200 --> 00:00:12,170
[jazz music]

3
00:00:16,220 --> 00:00:20,220
with the SAM team, and we're looking at the Mars--the

4
00:00:20,240 --> 00:00:24,230
SAM Mars chamber. SAM is on the Curiosity rover, and it's

5
00:00:24,250 --> 00:00:28,300
a suite of three instruments--and it has the ability to

6
00:00:28,320 --> 00:00:32,360
look for potential suitability for ever having

7
00:00:32,380 --> 00:00:36,430
past signs of life on the Martian surface. The chamber was

8
00:00:36,450 --> 00:00:40,480
built to simulate the environment that the SAM instrument will experience

9
00:00:40,500 --> 00:00:44,520
on the Martian surface. We need the Mars chamber on Earth so that we

10
00:00:44,540 --> 00:00:48,560
can operate the SAM testbed and run all the experiment sequences

11
00:00:48,580 --> 00:00:52,580
that we hope to run on the Martian surface. We're simulating extreme

12
00:00:52,600 --> 00:00:56,600
cold surface temperatures--Mars is much colder than Earth so we can

13
00:00:56,620 --> 00:01:00,610

expect to experience temperatures as cold as minus 120 degrees

14

00:01:00,630 --> 00:01:04,690

Celsius and as, y'know, warm as a cool

15

00:01:04,710 --> 00:01:08,760

summer day--around 20 degrees C. So, unlike your standard

16

00:01:08,780 --> 00:01:12,830

environmental test chamber or thermal vacuum chamber, this chamber

17

00:01:12,850 --> 00:01:16,880

is capable of actually operating in an atmosphere,

18

00:01:16,900 --> 00:01:20,930

so we can simulate the thin Martian carbon dioxide

19

00:01:20,950 --> 00:01:24,970

atmosphere. I like working on the chamber, but what's really,

20

00:01:24,990 --> 00:01:29,000

really great is the instrument that sits in the chamber. And I work with

21

00:01:29,020 --> 00:01:33,020

a fabulous team of people, so every day, we have new challenges,

22

00:01:33,040 --> 00:01:37,030

and that's the best part about working on the SAM chamber.

23

00:01:37,050 --> 00:01:41,110

[music, beeping]

24

00:01:41,130 --> 00:01:45,180

[music, beeping fades]